Printer with Unified Display List and Banded Display Lists

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Abstract

A method is provided for generating an image having a plurality of bands. A page description representative of elements of the image is received from an external source. A display list buffer is then built that has a plurality of display list elements (DLE) derived from the page description, each display list element being representative of a corresponding graphic item. A banded display list is then built that is representative of the plurality of bands of the image. For each band of the plurality of bands, a set of templates is stored in the banded display list in which each template points to a DLE in the display list buffer for each corresponding graphic item that is spawned within the band. Each band is then rendered by using the set of templates stored for that band to access a corresponding set of DLEs from the display list buffer. In one embodiment, a printer includes a microprocessor with on-chip memory. All of the sets of templates for each of the plurality of bands can be loaded together into the on-chip memory along with a band buffer for rendering a band due to the relatively small size of the banded display list.